



# Society for Effective Lessons Learned Sharing (SELLS)

June 2003

This fact sheet is part of a collection developed by SELLS to support Department of Energy and National Nuclear Security Agency Lessons Learned Programs.

## Introduction

The Society for Effective Lessons Learned Sharing (SELLS) has established an infrastructure for capturing, distributing, and archiving good work practices and success stories across the complex. Fact Sheets like this one provide a method for sharing that information

The purpose of this fact sheet is to focus on sharing positive lessons learned, to encourage identifying and sharing success stories, and to share successes from utilizing lessons learned information. In this context, a success story is an application of information from a previously issued lessons learned that was applied to improve operations at another DOE site or facility.

## Success Stories

### November 2002

Fluor Hanford's (FH) Suspect/Counterfeit (S/C) subject matter expert worked closely with the FH Lessons Learned Coordinator to develop and issue lessons learned [2002-RL-HNF-0064](#), *Suspect/Counterfeit Bolts in Ratchet Tie-down Assemblies*. That LL was intended to make Hanford facilities aware of the problem of S/C components in equipment that could potentially be used to tie down hazardous, radioactive, or otherwise sensitive loads. Because of the

significant response at Hanford in the following months, FH sent that lessons learned through the DOE-LL listserver on February 4, 2003. Subsequently, several other DOE sites found S/C bolts in ratchet tie-down assemblies and filed occurrence reports on them. Article number 3 in Operating Experience Summary 2003-05 reported that a QA Inspector and a QA Engineer at West Valley Demonstration Project (WVDP) found S/C bolts in an assembly to be used to secure low-level radioactive waste. Management at WVDP had directed QA inspection of all tie-down activities based on a review of the Hanford-issued lessons-learned report.

### October 2002

The Central Plateau Remediation Project at Hanford submitted lessons they learned during transition of several shutdown facilities and 150 personnel from Bechtel Hanford, Inc (BHI) to Fluor Hanford (FH). The transition was to realign work scope with the long-term strategic plan for Site contractor responsibilities. Those lessons were published in Project Hanford Lessons Learned [2002-RL-HNF-0056](#), *Central Plateau Transition*, which was transmitted through the DOE-LL listserver on November 14, 2002. Team leaders for the transition of the 242-A Evaporator from Fluor Hanford to CH2M Hill, another Hanford prime contractor, used lessons from the Central Plateau transition to improve the Evaporator transition in April and May 2003.

### June 2000

Project Hanford Lessons Learned, [1999-RL-HNF-0055](#), *Trailer Parked Under Power Line Violates Safe*

*Stand-off Distance*, issued on December 20, 1999, reported a worker putting himself potentially at risk of electrocution when he climbed on a transport cask and violated the safe standoff distance from a 230,000 volt power line running overhead. He felt a tingling sensation as he climbed the ladder. The trailer carrying the cask was parked under the high-voltage power line contrary to local procedures. The electrical safety subject area expert at Los Alamos National Laboratory felt that they had a similar vulnerability so he publicized the Hanford event in their Electrical Safety Bulletin number 3 issued on June 23, 2000.

### November 2000

Meetings where lessons learned are shared, have proven to be valuable forums for sharing lessons learned, best practices, and other information. During the Technical Information Exchange (TIE) 2000 meeting in Augusta, Georgia, presentations were given on the development of a vegetated soil cover design for Sandia National Laboratories (SNL) Mixed Waste Landfill. Following up with SNL collectively, the Nevada Test Site and the Idaho National Environmental Engineering Laboratory saved SNL between \$600K and \$1M in research and field-testing by providing Sandia with their modeling, hydrology, engineering expertise, soils data, documents, and peer review information.

By modifying and applying a new technology (GeoSiphon Treatment System) used at the Savannah River Site, Lawrence Livermore National Laboratory (LLNL) successfully

completed the Site 300 Building 832 Canyon Iron Filings Treatment System at half the cost (\$600K) of the original estimate of \$1.2M for the project. Open communications, discussions, and sharing of technology and ideas led to LLNL using the iron treatment wall system instead of a conventional pump and treat system, resulting in an estimated \$3.1 million in cost savings.

## February 2000

Bechtel Nevada developed several checklists that outlined company shipping standards and Department of Transportation (DOT) regulatory requirements for the DOE Nevada Operations Office. The checklists helped ensure that hazardous materials met DOT shipping requirements. Shipping papers were more accurate and fewer shipments had compliance problems because the checklists were used. This information was disseminated via the DOE Lessons Learned List Server. As a result, a modified version of one checklist was used to ship low level waste from Oak Ridge, Tennessee, to the Richland, Washington, disposal site on 8/3/00.

## January 2000

In response to a Hanford lessons learned, the Chief Electrical Safety Officer (Authority Having Jurisdiction) at Los Alamos National Laboratory determined that LANL had promulgated inadequate guidance on safe standoff distances from power lines. Subsequently, the site wide electrical safety committee distributed an electrical safety notice to organizational electrical safety officers. The notice was also published in the LANL Operating Experience Summary.

## March 1999

Using lessons from a fatal June, 1998 carbon dioxide fire protection system discharge at INEEL, personnel at Hanford analyzed two processes involving compressed gasses. At the Pacific Northwest National Laboratory, they found low oxygen levels in a room where nitrogen dewars are filled. At the Fast Flux

Test Facility, they found the Halon system for the emergency diesel enclosure could cause excessive Halon levels with no evacuation warning or discharge delay. Neither of those situations would have been found had it not been for heightened awareness resulting from sharing lessons from the INEEL event DOE-wide.

## January 1998

As the result of a fatality at the East Tennessee Technology Park (ETTP) in Oak Ridge, Tennessee, in a welding-related incident, the "I Care/We Care Program" was established. The program was created to provide a process for employees, subcontractors, lessees, and visitors to submit issues, near-misses, suggestions, and concerns to management for resolution. "I Care" issues may be submitted anonymously by phone or on paper. Everyone who reports a safety issue is given a small token of appreciation. Really noteworthy safety suggestions are considered for ETTP manager's recognition awards which are presented at All Hands meetings. Staff submitted 196 safety and health issues between August and December 1997. Of these, 54 were deemed near-misses, and 166 were resolved. Three lessons learned have been generated from the "I Care" issues. Other DOE sites have used information about this program to improve their safety and health programs.

## July 1997

As the result of following up on a lessons learned on Modular Offices and Metal Skid Electrical Requirements, the Waste Isolation Pilot Plant avoided a potential electrical shock to maintenance personnel. When the Savannah River Site posted the lessons learned on the DOE List Server in December 1995, the lessons learned was distributed to the WIPP Electrical Safety Committee. In 1996, all modular office electrical systems were tested to verify that both the systems and the building metal frame/skin were connected to the site's ground system. In July 1997, a maintenance technician was sent to repair a water

leak under a modular office and came into contact with a metal conduit containing 110 volt energized conductors. Contact with the conduit caused it to separate at a coupling pinching the electrical conductors against the sharp edges of the conduit. When the conductors came in contact with the sharp edges of the conduit, the electrical insulation was damaged resulting in an electrical arc. The technician was not shocked or injured because the fault current was dissipated through the frame of the modular office to the site ground system and the breaker tripped on over-current as designed.

## January 1997

A quantity of depleted uranium in a storage building at the Pantex Plant exceeded the threshold limit for a Category 3 nuclear facility. On January 17, 1997, following a review of the lessons learned reported by Pantex, the Hanford Site conducted an inventory check of a warehouse and discovered that the quantity of depleted uranium stored there exceeded threshold limits. Appropriate actions were taken.

## December 1996

The anchor system of a sixty-meter meteorological tower at the Sandia National Laboratory failed, causing the tower to fall and resulting in damage and replacement costs of \$20,000. The cause was attributed to the corrosion of galvanized steel rods in the underground section of the tower support system. This information was sent out as an alert via the DOE Lessons Learned List Server. As a result, the Idaho National Engineering and Environmental Laboratory and the Savannah River Site were able to take precautions to avoid similar occurrences by applying the information to their own operations.

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Lessons Learned Program Fact Sheets, by the Society for Effective Lessons Learned Sharing (SELLS), are available from the DOE Lessons Learned Web Site:

<http://tis.eh.doe.gov/ll/sells/faq.html>

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